

Rock pallet and dolly

Bill of materials, parts, and hardware

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Pallet materials:

	Description	Qty	Material	Size	Status
1	Top plate	1	Steel, A36	48"x48"x0.5"	Ready for welding
2	Upper cross beams	5	Structural steel I-beam S 3 x 7.5	48 inch long	Drawing finished, material ordered, to arrive 3/27
3	Lower cross beams	3	Structural steel square beam TS 4 x 4 x 0.375 wall thickness	48 inch long	Drawing finished, material ordered, to arrive 3/27
4	Pallet pad	1	Rubber, 50 durometer	48"x48"x0.5"	Ordered 3/27
5	Spacers to mount hydraulic cylinders and dollies	8	Aluminum	See drawings	Drawings finished, parts rough cut, ready for machining

Pallet hardware:

	Description	Qty	Catalog	Cat. Number	Size, features, notes
6	Machinery dolly, swivel	2	McMaster	2496T77	3 polyurethane rollers, 24 lbs, 7500 lb capacity, 4 5/8 inch height, 1 unit in hand, 1 on order
7	Machinery dolly, fixed	2	McMaster	2496T75	3 polyurethane rollers, 20 lbs, 7500 lb capacity, 4 5/16 inch height, 1 unit in hand, 1 on order
8	Fixed dolly mounting bolts	8			In hand: 3 inch long 5/16-18
9	Swivel dolly mounting bolts	8			In hand: 1 inch long 5/16-18
10	Dolly mounting washers	16			5/16"
11	Hydraulic cylinder bolts	8			5/16"-18 1.75 inch long
12	Hydraulic cylinder washers	8			In hand: 5/16"
13	Long central bolt for swivel dolly	4			TBD
14	Bushing for swivel dolly	4			TBD
15	Clevis pins to pull pallet**	3	McMaster	98306A574	4.5" steel, 0.75" diam, shear, 21.6 kip shear strength

** may not be needed if front of roller dollies can be used to pull pallet

Miscellaneous items:

	Description	Qty	Material	Size and notes
16	Top plate support inserts	16	TBD	TBD
17	Base plate for dollies to roll on	1	½ inch aluminum	Kneafsey will take care of this
18	Hardware for mounting front support plate (angles, bolts, nuts, washers)			TBD
19	Roller dolly steering handle	1	McMaster 2496T84	2 units ordered 2/26
20	Blocks to use while removing dollies and hydraulic cylinders			
21	Blocks to brake the dollies			
22	Slings to pull pallet			
23	Hand tools for removing dollies and hydraulic cylinders			

24	Rags to clean up spilled oil			
25	Hydraulic fluid in a container	0.5 gal		Pump has 0.2 gal capacity

Hydraulic components:

	Description	Qty	Catalog	Cat. Number	Inlet connection	Outlet connection	Features	Status
(A)	Hydraulic cylinder	4	McMaster	2990T17	3/8 NPTF female	---	1.5" ram OD, 5.2 cu.in. oil capacity, 2.125" stroke	1 unit in hand, need 3 more
(B)	Hydraulic hose	5	McMaster	2916T5, -T8, -T9	3/8 NPT male	3/8 NPT male	Lengths TBD	One 6' length in-hand
(C)	Hand operated hydraulic jack	1	McMaster	2992T15	--	3/8 NPT female	10,000 max pressure, 45 cu.in. capacity	Need to pick up from Receiving
(D)	3 inch nipple	5	McMaster	2983T35	3/8 NPTF male	3/8 NPTF male		1 unit in hand
(E)	Needle shutoff valve	5	McMaster	2983T41	3/8 NPTF female	3/8 NPTF female		1 unit in hand
(F)	Pressure gauge with adapter	5	McMaster	2965T5 +2965T7	3/8 NPTF male	3/8 NPTF female	0-10000 psi range	1 unit in hand
(G)	Manifold	1	McMaster	2983T33	3/8 NPT female	3/8 NPT female	6 ports	